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## Ecosystems in Peril

- Highly diverse plant and animal communities
- Only 1% of prairies remain
- Only 0.02% of savannas remain (~2,400 acres out of ~12,000,000)

Oak Savanna, Barrens, and Prairie Complexes in Eastern United States

**Prairie & savannas circa 1800 (Nuzzo 1986)**

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### Highly diverse systems, many game and rare and declining species

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# Prairie and Savanna in Michigan

- Prairie is a native grassland community.
- Savanna is a generic term for a mix of prairie and trees
- Numerous different types depending on climate, soils, fire frequency




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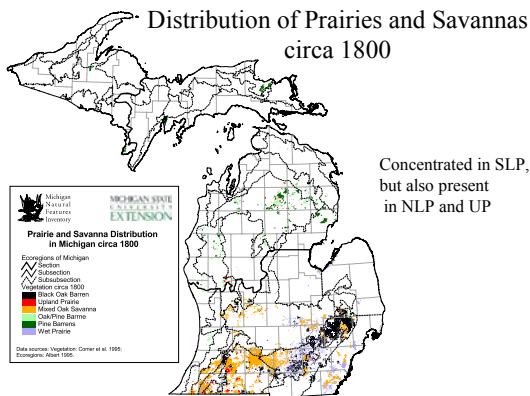
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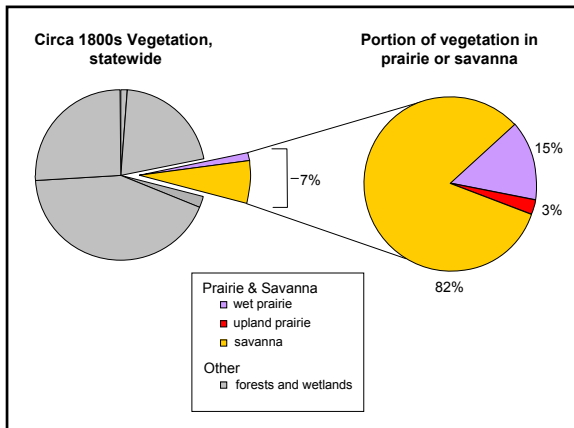
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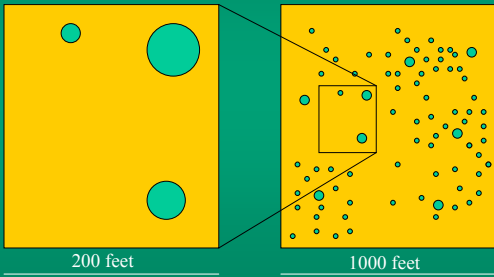
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## Prairie or Savanna? A Matter of Scale



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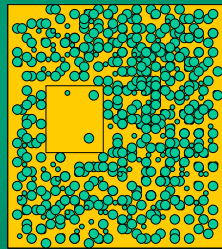
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## Many of our oak forests are actually former savannas



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## Management: Broadening our Objectives

- Larger burn units
- Incorporate adjacent oak woods into burns
- Burn through hedgerows



Traditional burn unit

Alternative burn unit

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## Nature's Management Tool: Prescribed Fire

- Burned every 1 - 10 years, historically
- Stimulates native grasses and wildflowers
- Sets back woody vegetation
- Sets back non-native species
- Stimulates seed germination



Michael A. Smith, OSU



Christopher Hoopes, Michigan DNR

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## Management: Alternatives to burning

- Brush-hogging
- Disking
- Grazing
- Herbicides



Tom Doherty, Michigan DNR

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## What are your goals?

Seek best combination of:

- Prescribed fire
- alternative management
- herbicide



James H. Jones, OSU

### Control of Autumn-olive?

- Fire alone will not work

### Restoration of a remnant?

- Need more than one year of burning



Christopher Hoopes, Michigan DNR

Document and monitor your work!

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## Success Story: Landowner Incentive Program (MDNR Wildlife Division)

- Over 1000 acres burned in 2006
- Working at 10 out of 14 private satyr sites
- Managing oak barrens for Karner blue butterflies: 50,000 found at one site



Photos courtesy: Christopher Heving, Michigan DNR-Wildlife

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## Conclusions

- Open lands in Michigan were primarily savannas
- Many of these former savannas are now closed canopy oak forests
- Seek opportunities to expand burn units and accomplish multiple objectives
- Increase burn frequency to restore remnants
- Keep up the good work!

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## More information:



[http://web4.msue.msu.edu/mnfi/pub/pdfs/2006-18\\_Prairies\\_and\\_Savannas\\_in\\_Michigan.pdf](http://web4.msue.msu.edu/mnfi/pub/pdfs/2006-18_Prairies_and_Savannas_in_Michigan.pdf)

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